GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

STARRED QUESTION NO:16
ANSWERED ON:26.02.2002
BIOTECHNOLOGY FOR MEDICINES
YEMPARALA VENKATESWARA RAO

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether attention of the Government has been drawn to the news item captioned Biotechnology canhelp to develop cost effective and safe medicines appearing in the `Indian Express` dated January 9, 2002;

(b) if so, the facts of the matter reported therein;

(c) the present stage of research being made in this regard; and

(d) the details of further plans for the purpose ?

Answer

MINISTER OF SCIENCE AND TECHNOLOGY (PROF. MURLI MANOHAR JOSHI)

(a) to (d) : A Statement is laid on the Table of the House.

STATEMENT IN RESPECT OF LOK SABHA STARRED QUESTION NO.16 TO BE ANSWERED ON 26.2.2002 - REGAF BIOTECHNOLOGY FOR MEDICINES.

Yes Sir; the Department is aware of the potential of biotechnology in combating important human diseases. With advances in biotechnology, it is possible to find solutions to diseases like AIDS and Malaria and many other infections. Genetic research has paved the way for individual based medicine. There is a paradigm shift in the understanding of disease processes. The major thrust of the Medical Biotechnology is development of diagnostics, new generation vaccines for prophylactic and therapeutic use, novel drug delivery systems and basic understanding of disease processes and immune responses. Programmes relating to pharmacogenomics, bicomputing, microbial and structural genomics, proteomics, Single Nucleotide Polymorphisms (SNPs) and their association with diseases like hypertension, coronary heart disease, diabetes, neurological disorders and cancers have been initiated. Stem Cell Biology research and application have also received major fillip. A good number of diagnostic assay systems have been developed, validated and transferred to the industries. Some have been launched in the market. An immuno-modulator developed as an adjunct to multidrug therapy for leprosy, that reduces the treatment duration and cures the disease, is available for use as immunotherapeutic agent. Development of new candidate vaccines for six important diseases like Cholera, Rabies, Tuberculosis, HIV/AIDS, Japanese Encephalitis and Malaria under S&T mission are either in preclinical or Phase-I/Phase-II huma volunteer trials. Efforts are to make available DNA vaccine to control rabies in dogs, in the market soon. Sixteen genetic clinics and counseling units are functional and have provided services to 16,500 affected families. National Institute of Immunology, New Delhi; Centre for DNA Fingerprinting and Diagnostics, Hyderabad; National Centre for Cell Science, Pune and National Brain Researcl Centre, Gurgaon are vigorously pursuing basic research on disease manifestation, prevention and control. While continuing the ongoing efforts, major emphasis in future would be to utilize the information available on the human genome and microbial genome sequence data to identify new targets for drugs and better predictive molecular medicine.